User Manual for

DR400 PC-RISOGRAPH USB Interface

4.0

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Preface

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The hardwires specified in this manual are only for RISOGRAPH duplicator. For other duplicator interface, please consult your local dealer.

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Chapter 1 Installation of DR400

1.1 Procedure to install DR400

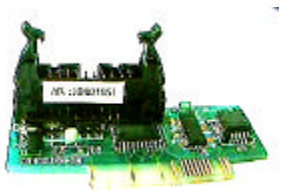
- Compare the package contents with the checklist.
- Install the hardware.
- Install the software.
  Note: The software and the user manual may be distributed electronically.

1.2 Hardware installation for GR

1.2.1 Checklist

Item	Part number	Name	Units
1	DR400-GR-1	Option I/F PCB (A)	1
2	DR400-GR-2	Cable in Duplicator	1
3	DR-PC-1	USB Cable	1
4	DR400-PC-2	USB Board (B)	1
5	DR400 For Windows	DR-400 Program Floppy Disk (or CD)	1
6		User manual	1

- Option I/F PCB (Card A)
  Optional PCB can be inserted in the I/F slot of main board of duplicator. (Fig 1)

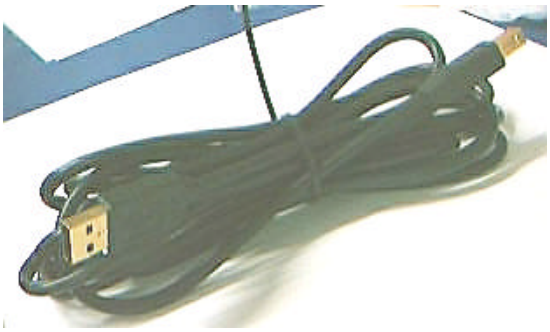


(Fig 1) (Fig 2)

Note: If you already have an original optional PCB type A for your sorter or other peripherals, you do need to order different package, which is a different hardware package. Consult your dealer.

- Cable in Duplicator
  This is a 20pin flat data cable. It connects the Optional I/F PCB (Item 1) and USB I/F card (Item 3). (Fig 2)

- USB Cable
  A 3-meter long USB cable connects to the type A of USB port of PC to type B port on the duplicator. (Fig 3)



(Fig 3)

(Fig 4)

- USB Board (Card B)
  Installed to the bottom of the duplicator. (Fig 4)

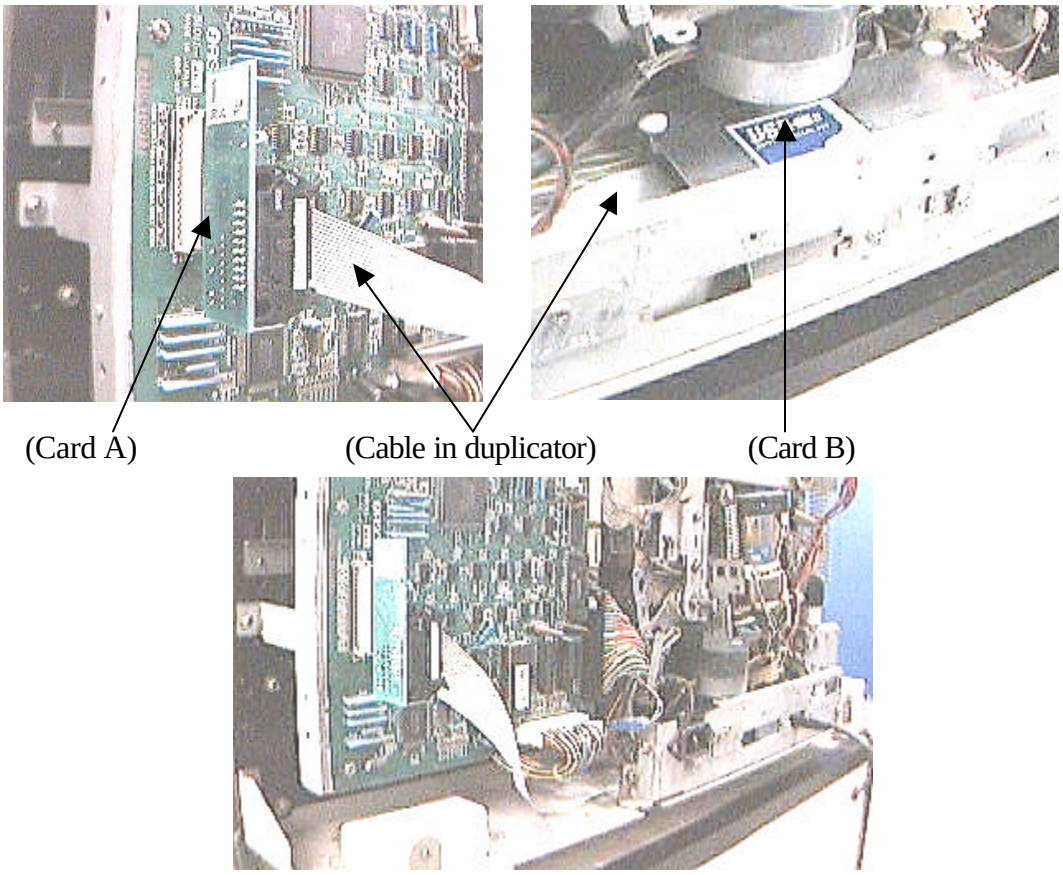
- DR-400 Program Floppy Disk or CD
  the entire DR400 program is in one 1.44M floppy disk or CD.

- User Manual
  This user manual give the detail of the installation, usage, troubleshooting etc. This could either be in the printed format or stored as PDF on CD.

1.2.2 Install the hardware

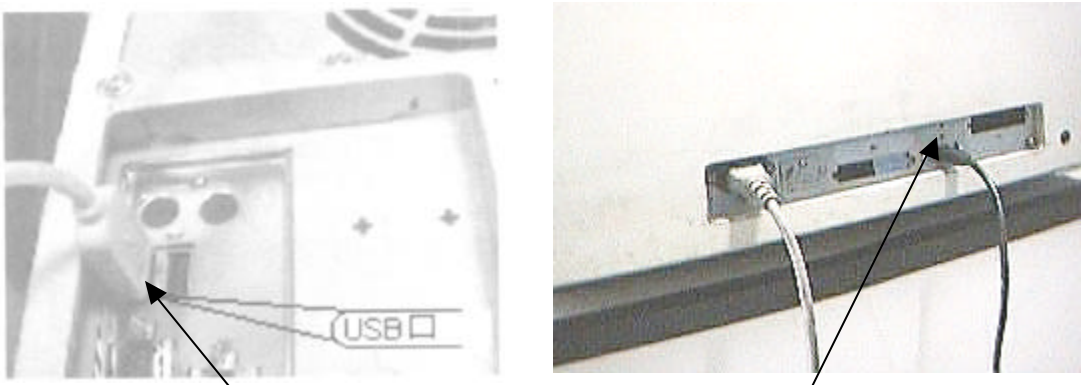
It is important to turn off the power of duplicator and proper grounding for the duplicator before the installation.

- Turn off the power of the duplicator and open the back cover.
- Install the option I/F PCB (Card A) on the slot of main board. **Notice the direction of the board. Do not inset in the wrong direction.** Install the card B on bottom of the case. Use the cable in duplicator to connect card A and card B. (Fig 5)



(Fig 5)

- Put back the back cover. Connect the USB cable connect the Card B to standard USB port on PC. (Fig 6)



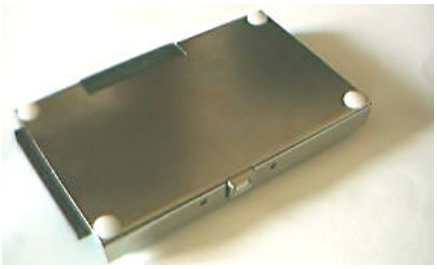
(Fig 6)

1.3 Hardware installation for RN

1.3.1 Checklist

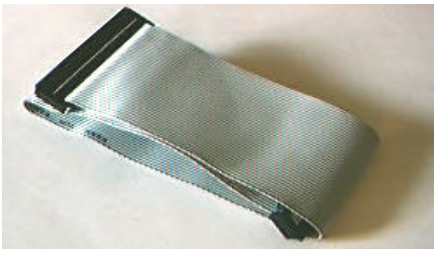
Item	Part number	Name	Units
1	DR400-RN-1	USB Board	1
2	DR400-RN-2	Cable in Duplicator	1
3	DR-PC-1	USB Cable	1
4	DR400-PC-3	Bracket of I/F PCB	1
5	DR400-PC-4	Screw M3	2
6	DR400-PC-5	Screw M4	2
7	DR400 For Windows	DR-400 Program	1
8		User manual	1

- USB Board
  Installed in the duplicator and connected to the USB port of PC. (Fig 7)



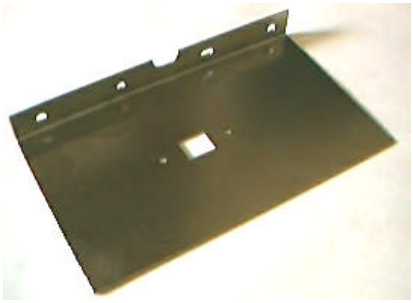
(Fig 7)

- Cable in Duplicator
  This is a 40pin flat data cable. It connects the CN213 on main board and the USB Board. (Fig 8)



(Fig 8)

- USB Cable
  A 3-meter long USB cable connects to the type A of USB port of PC to type B port on the duplicator. (Fig 3)
- Bracket of I/F PCB
  ”L” type metal plate to support the USB Board in the duplicator. (Fig 9)



(Fig 9)

- Screw M3
- Screw M4
  Secure the board in the duplicator. (Fig 10)

(Fig 10)

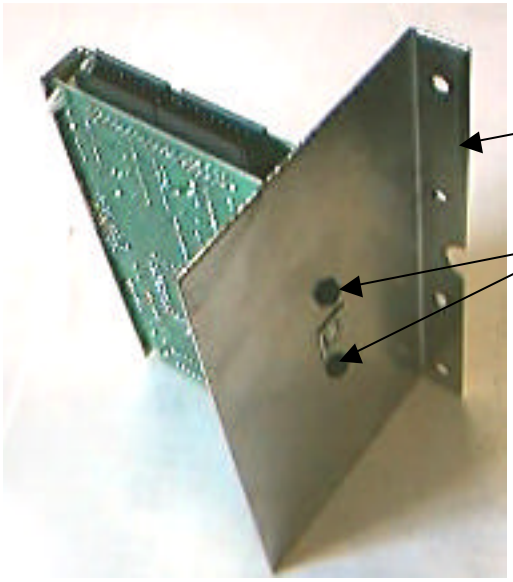
- DR-400 Program Floppy Disk or CD
  the entire DR400 program is in one 1.44M floppy disk or CD.

- User Manual
  This user manual give the detail of the installation, usage, troubleshooting etc.

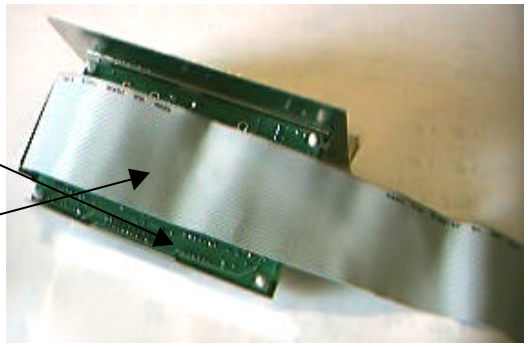
1.3.2 Install the hardware

It is important to turn off the power of duplicator and proper grounding for the duplicator before the installation.

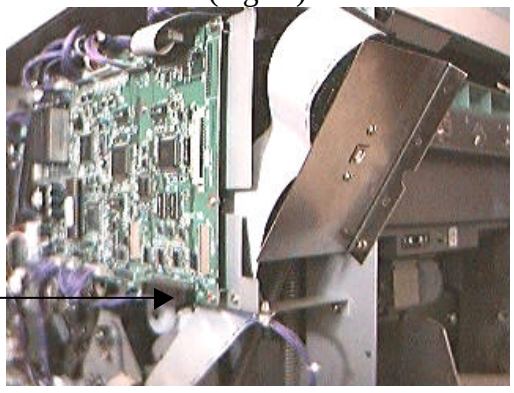
- Install the RN20XX USB Board
  1. Secure the USB Board on the Bracket of I/F PCB using 2 M4 screws. (Fig 11)
  2. Put the Cable in Duplicator to the USB Board (Fig 12)
  3. Open the back cover of RN20XX. Put the combo in the space of the back of the main board. (Fig 13)



(Fig 11)

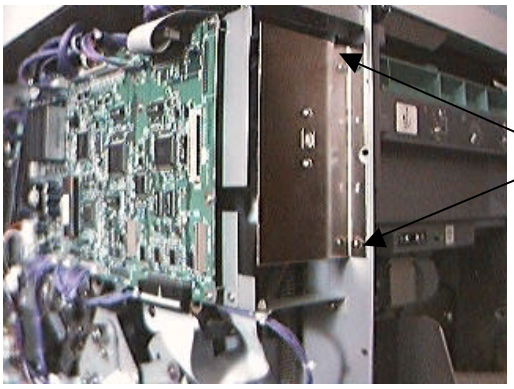


(Fig 12)



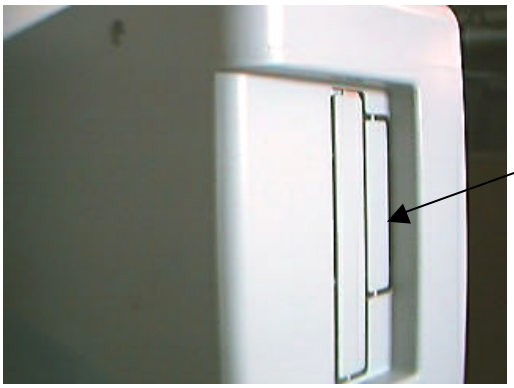
(Fig 13)

4. Secure the combo to the duplicator. Connect the other end of the cable in duplicator to the CN213 of main board. (Fig 14)



(Fig 14)

5. Remove the reserved plastic block on the back cover. (Fig 15)



(Fig 15)

6. Finished the installation by connect the USB Board and PC using the USB cable

- Install the RN21XX USB Board.
  1. Remove the original single direction interface. (Must installed by qualified professional)
  2. Follow the installation of RN21XX USB Board.

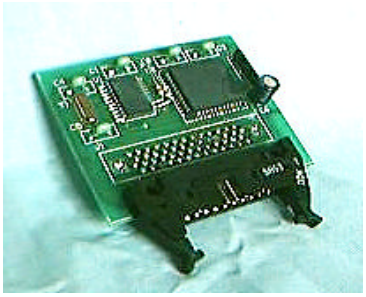
1.4 Hardware installation for CR/TR

1.4.1 Checklist

Item	Part number	Name	Units
1	DR400-CR/TR/1	Option I/F PCB A	1
2	DR400-CR/TR/2	USB Board B	1
3	DR400-CR/TR/3	Flat Data Cable	1
4	DR-PC-1	USB cable	1
4	DR400-PC-3	Bracket of I/F PCB	1
5	DR400-PC-4	Screw M3	2
6	DR400-PC-5	Screw M4	2

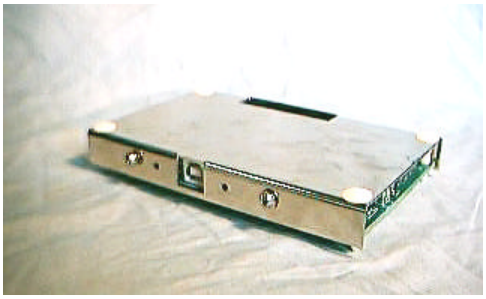
7	EPROMTR/CR	ROM	1
8	DR400 For Windows	DR400 Software	1
9		User manual	1

- Option I/F PCB A
  Insert to the main board. (Fig 16)



(Fig 16)

- USB Board B
  Installed on the bottom in the duplicator. Internally connect the Option I/F PCB using flat data cable. Externally connect to PC us USB cable. (Fig 17)



(Fig 17)

- Flat Data Cable
  This is a 20 pin data cable connect the Option I/F PCB and USB Board. (Fog 18)

- USB Cable
  A 3 meters long USB cable connect to the type A of USB port of PC to type B on the USB Board.
- Bracket of I/F PCB
  Support for the USB Board in the duplicator. (Fig 19)

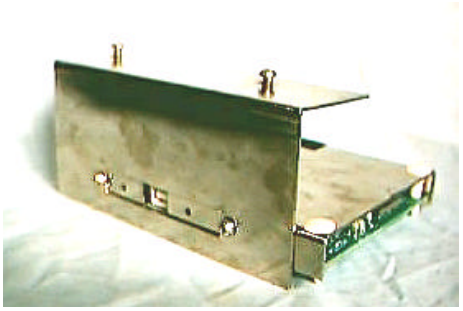
(Fig 19)

- Screws
  Already put on the bracket and USB Board.
- ROM
  Used to replace the original EPROM on board to support the scan feature.
  TR: SS/V.x.xx (not support TR1550) CR: CRS/V.x.xx
- DR-400 Program Floppy Disk or CD
  the entire DR400 program is in one 1.44M floppy disk or CD.

- User Manual
  This user manual give the detail of the installation, usage, troubleshooting etc.

1.4.2 Install the hardware

- Secure the USB Board to the bracket use screw M3. (Fig 20)

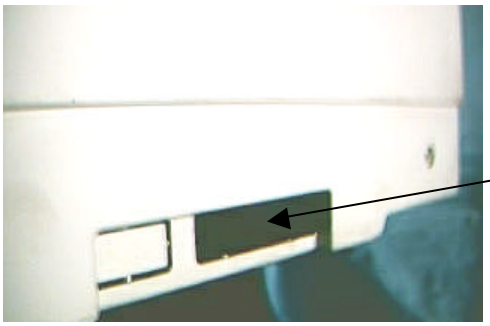


(Fig 20)

- Connect the USB Board to Option I/F PCB using the flat data cable. (Fig 21)

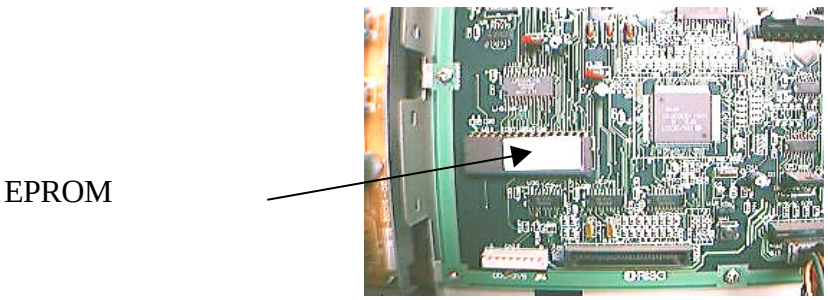
(Fig 20)

- Turn off the power of duplicator and unplug the power cable. Take off the back cover of the duplicator. Remove the plastic block reserved for the interface. (Fig 21)



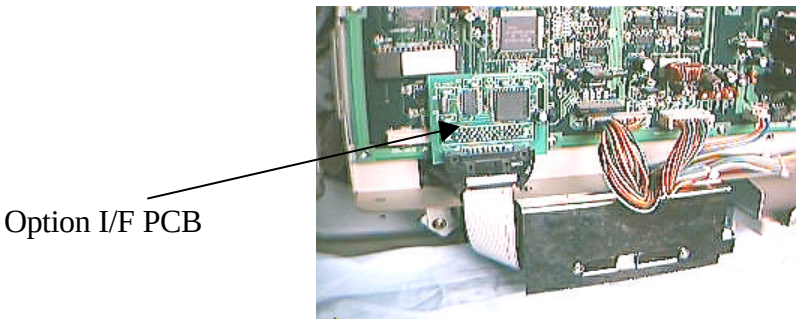
(Fig 21)

- Replace the EPROM.
  It is very important to insert the EPROM in the right direction. If you do not know how to do it, ask a professional to help. Special tools might be required. If you use a flat screwdriver, do it slowly. EPROM a fragile and handle with care. (Fig 22)



(Fig 22)

- Secure the bracket to the duplicator and insert the Option I/F PCB to the main board. (Fig 23)



(Fig 23)

- Put back the back cover.
- Enter the service mode and type “97” and “90” code.
- Connect the USB Board to the PC using the USB cable.

1.5 Software Installation

1.5.1 Requirements

- A RISOGRAPH duplicator. (For duplicator of Ricoh or Duplo, please call your local dealer).
- One PC running Windows 98/Me/2000/XP
- Pentium III 500 or up (AMD KIII500 and up)
- 256M or memory. The bigger the better.
- 420M of hard disk space.
- Color display.
- Mouse.

1.5.2 Install and Uninstall DR400 under Windows 98/Me

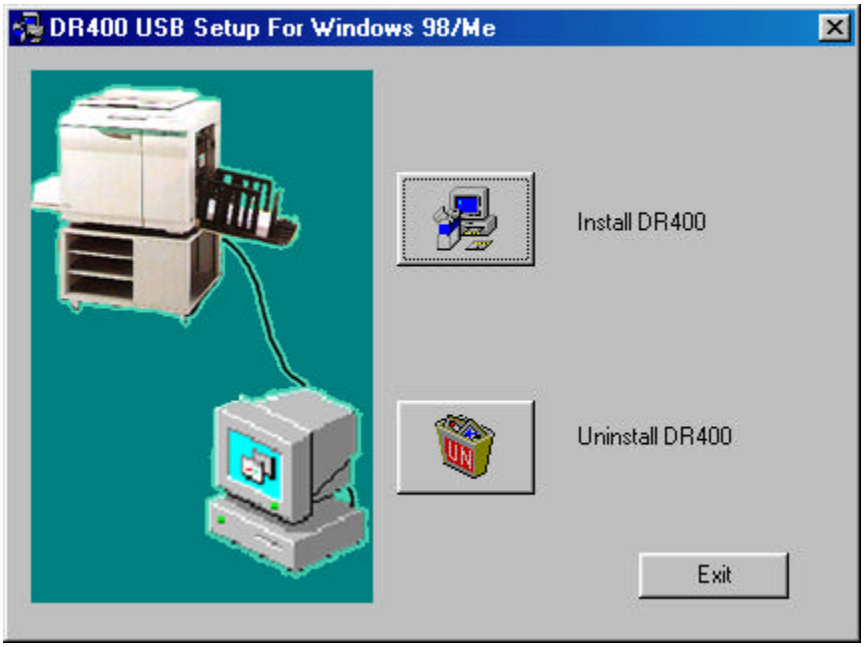
For Windows 98/Me, you need to have at lease one local printer driver installed. The setup program will warn you and stop installation if you have not yet installed one.

Insert the floppy disk or CD. Copy the whole disk to hard disk. Delete the unwanted printer driver. Here is a table for you to decide which print driver is needed. After the setup, you can still select the duplicator type in the DR400 application.

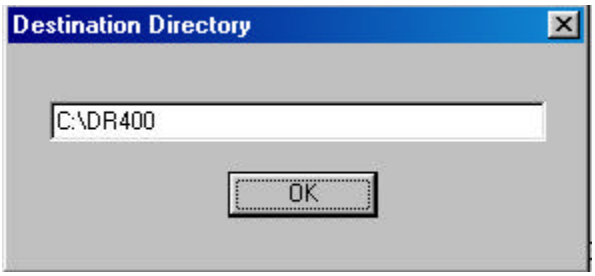
Duplicator resolution	Machine	Printer driver used
300x300	TR 1000,TR1530, CR1600, CR1630	300x300
300x400	GR1700, GR1710, GR2700, GR2710, GR3710, GR2000	300x400, 400x300, 400x400
400x400	GR1750, GR2750, GR3750	400x400
600 X600	GR3770	600x600

Note: On 300x400 machine, 400x300 is for Two/Up. Some word document cannot print tables properly, and then 400x400 is used instead.

- Run the setup.exe. (Fig 24) Select **Install DR400** to install the DR400 software. Select **Uninstall DR400** to uninstall the DR400 software.
- When select **Install DR400**, you will be asked to select the directory to store the DR400 software. (Fig 25). Click OK to finish the installation.
- After installation, go to My Computer->Printers to check the printer driver is installed.



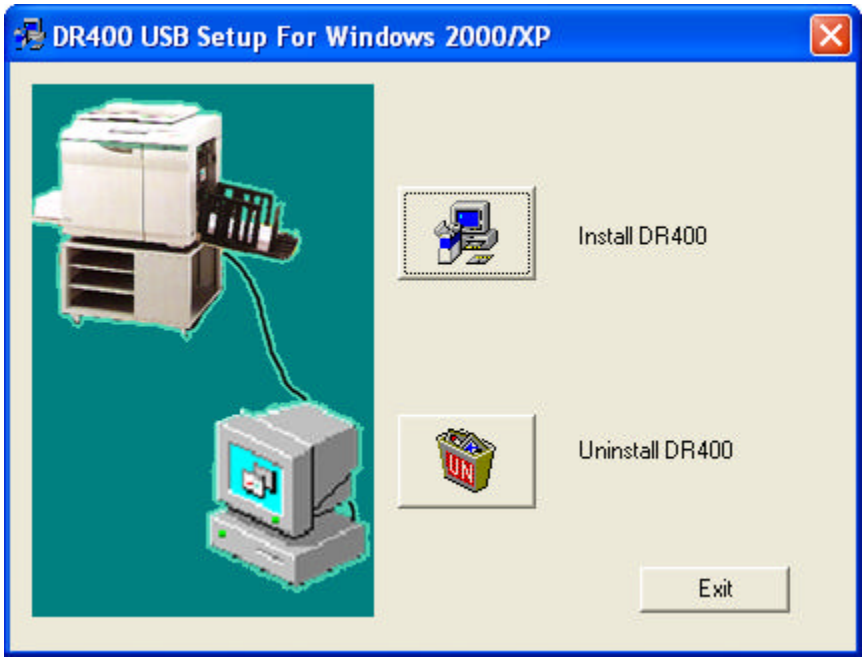
(Fig 24)



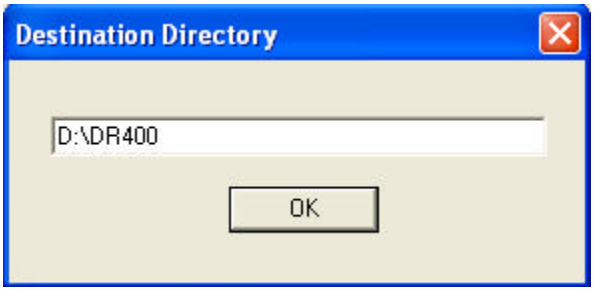
(Fig 25)

1.5.3 Install and Uninstall DR400 under Windows 2000/XP

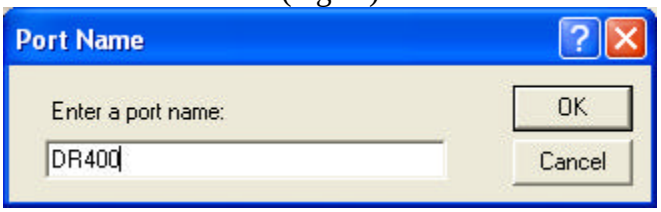
- Windows 2000/XP setup is a three-step process.
  1. Setup the application. Run setup.exe (Fig 26) Click Install DR400 icon. Select the destination directory (Fig 27). Click OK. When a pop dialog asking for entering port name enter "**DR400**" (Fig 28).
  2. Add the printer driver needed. Go to Control Panel->Printers and Faxes. Select "Add a printer". Go to 2000 directory and select the printer driver you want to select. Select either local or network (Fig 29). Do not check "Automatically detect my plug and play printer". When asking the port please select **DR400 (Local Port)**. (Fig 30).
  Note: DR400 (Local Port) is meant for DR400 printer driver, do not try to use this port for other printer driver. It may cause un-expected result. Only add the printer driver you needed. See 1.5.2.
  When a pop-up warning (Fig 31) click "Continue Anyway".



(Fig 26)



(Fig 27)

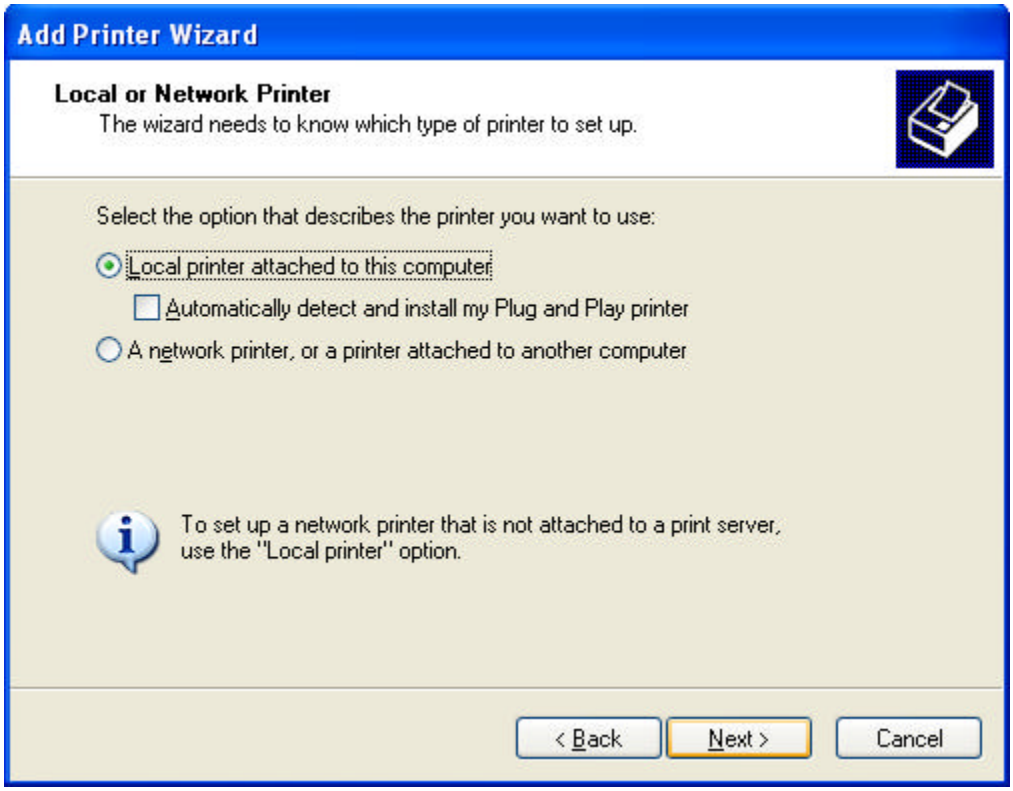


(Fig 28)

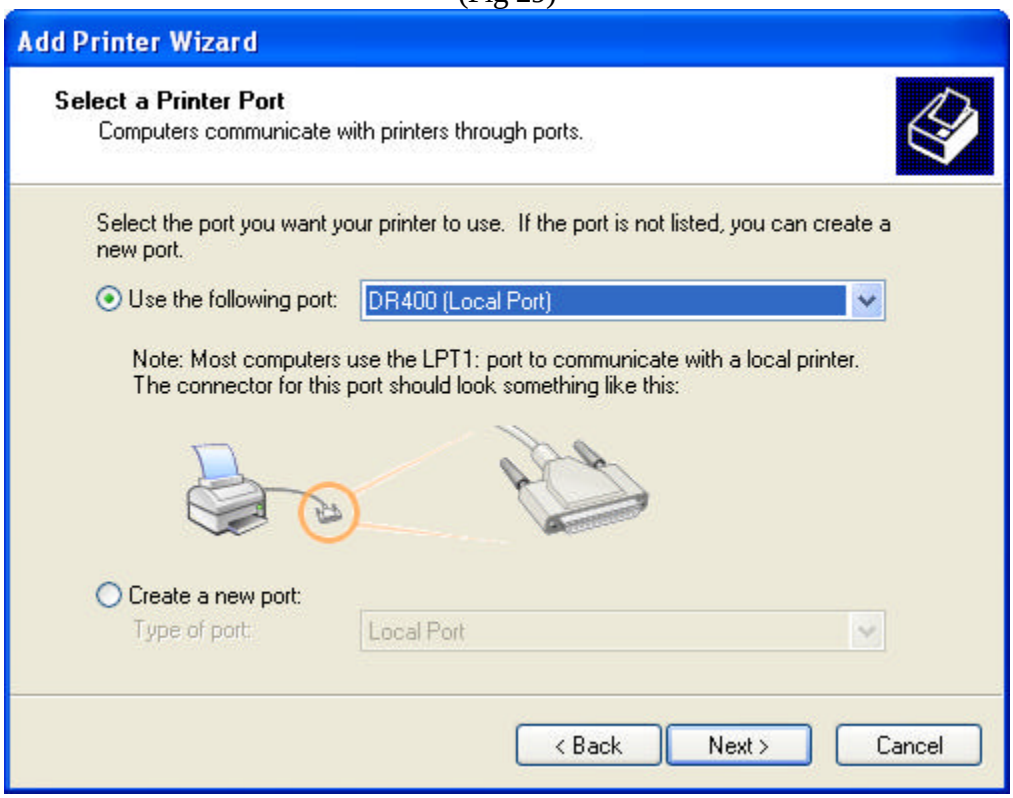
Note: The example show here is under Windows XP. Windows 2000 is very similar but may have slightly different dialog.

3. Restart the Windows 2000/XP.

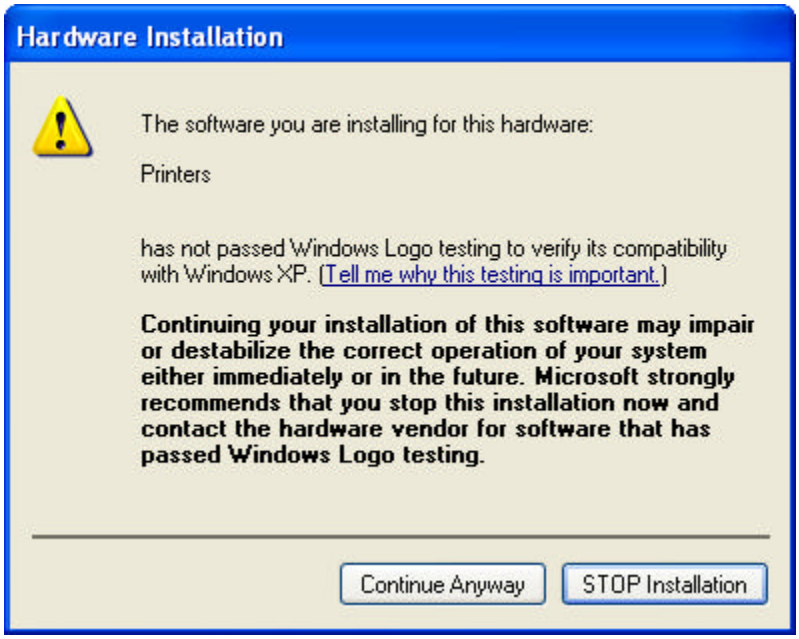
- To uninstall, first run the setup.exe and click Uninstall DR400. Remove the printer driver and restart the Windows 2000/XP.


Add Printer Wizard
Local or Network Printer
The wizard needs to know which type of printer to set up.
Select the option that describes the printer you want to use:
Local printer attached to this computer
Automatically detect and install my Plug and Play printer
A network printer, or a printer attached to another computer
To set up a network printer that is not attached to a print server, use the "Local printer" option.
< Back
Next >
Cancel

(Fig 29)


Add Printer Wizard
Select a Printer Port
Computers communicate with printers through ports.
Select the port you want your printer to use. If the port is not listed, you can create a new port.
Use the following port:
DR400 (Local Port)
Note: Most computers use the LPT1: port to communicate with a local printer.
The connector for this port should look something like this:
Create a new port:
Type of port:
Local Port
< Back
Next >
Cancel

(Fig 30)


Hardware Installation
The software you are installing for this hardware:
Printers
has not passed Windows Logo testing to verify its compatibility with Windows XP. (Tell me why this testing is important.)
Continuing your installation of this software may impair or destabilize the correct operation of your system either immediately or in the future. Microsoft strongly recommends that you stop this installation now and contact the hardware vendor for software that has passed Windows Logo testing.
Continue Anyway
STOP Installation

(Fig 31)

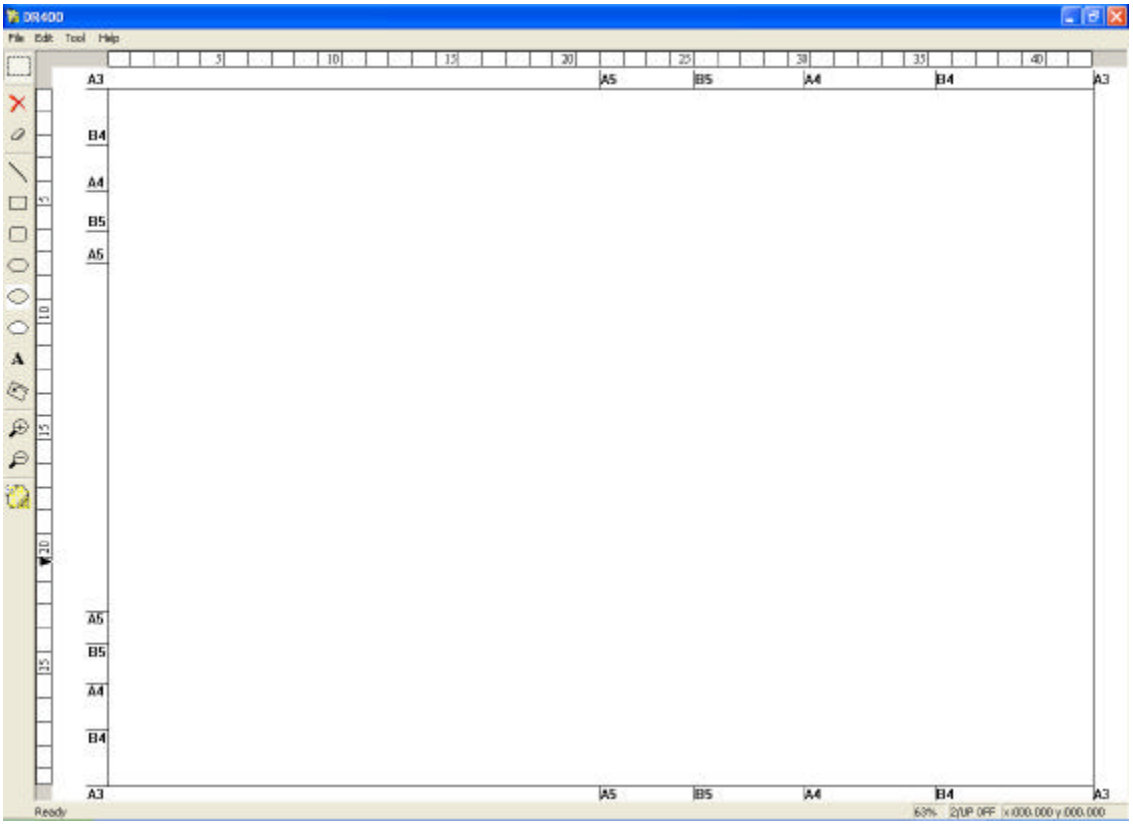
Chapter 2 Operation Manual

2.1 Look and feel

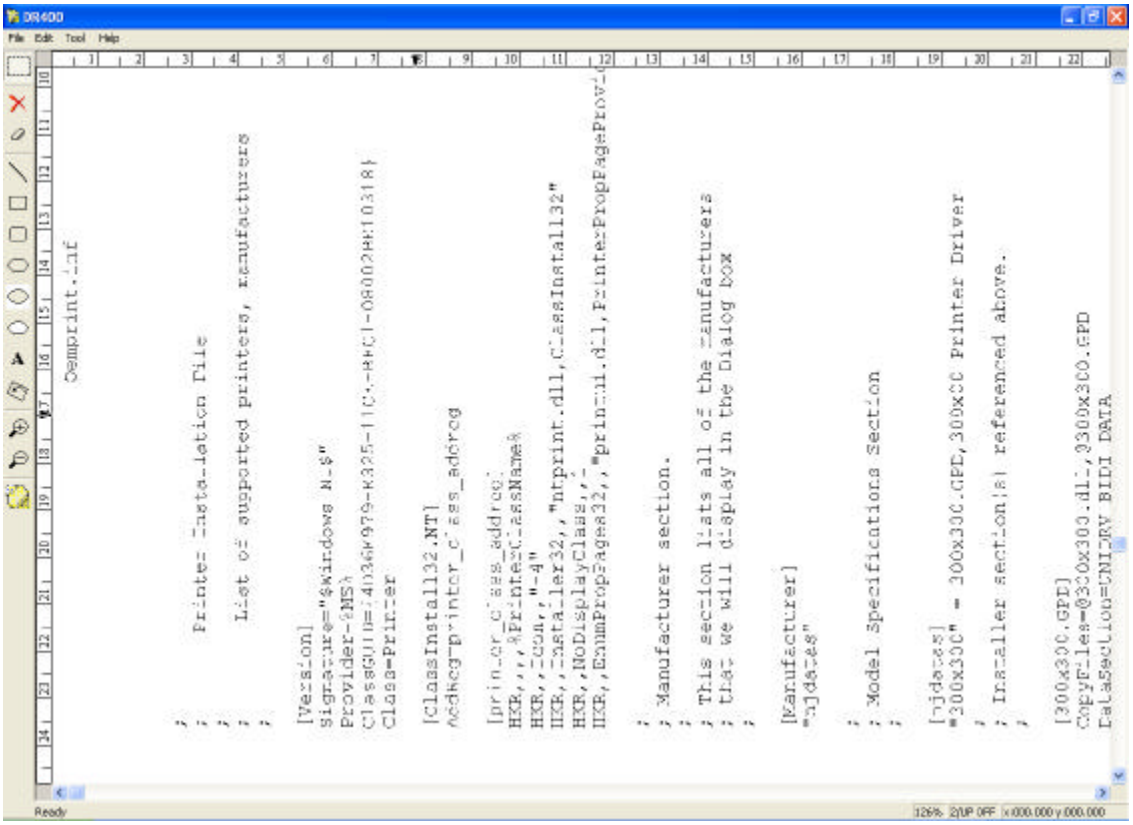
When DR400 is started, either by manually executing it from the DR400 program group or by printing a document from any Windows application, it will show like this (Fig 32)

On left side is the tool bar to give a quick access the most common used functions. On top and left side there are rulers. The units can be either millimeter or inch. On the bottom right side are three statuses. The first box shows the display ratio to the actual size of the paper. The second box shows the state of Two/Up. The third box shows the x and y offset when mouse dragged to select.

Inside is the real image corresponding to the duplicator. The view showing in Fig 32 is the over view. Several level of zoom is provided. If the screen bit is bigger or equal the actual bit on the master, the zoom in will not work any more. Here is a look at the zoomed in view (Fig 33). This is the place you edit and play before you do the real printing to duplicator. If you select **Auto Master Make**, the image will first print to the software and automatically make the master. It is up to you to use **Auto Master Make.**



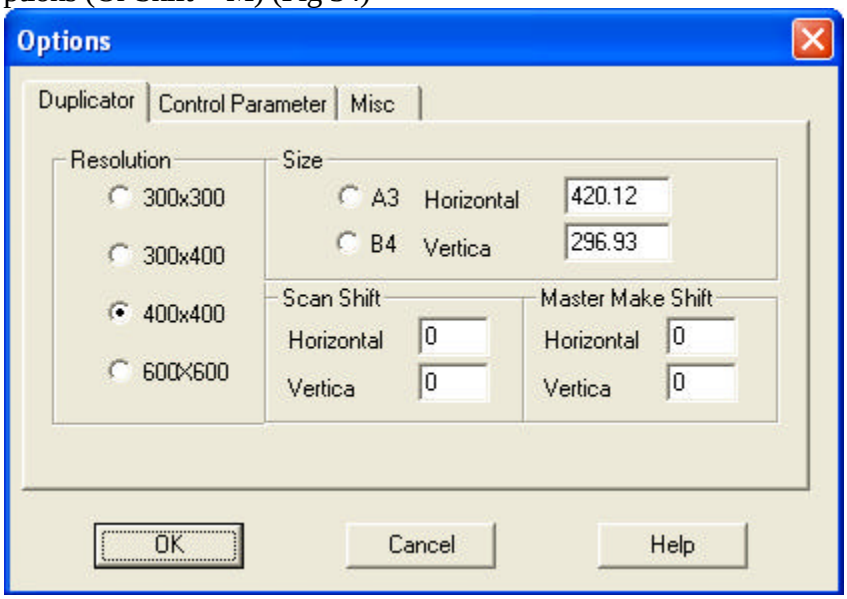
(Fig 32)



(Fig 33)

2.1.1 Select the duplicator type

It is very important to select the right duplicator type. When first installed the software, please make sure you have the right duplicator selected. Go to main menu Tools->Options (Or Shift + M) (Fig 34)



(Fig 34)

On the left side, please check the right resolution. You also need to use proper printer driver to PRINT INTO the program. In the size selection, you can either give the width and height or simply select the A3 or B4. The size here is the size of the image board, not the master size. For the duplicator here, only TR or CR should select B4, other machine should select A3.

Note: When the size does not match, adjustment might be needed. Check http://www.njdatas.com to see if there is any information about this. The number showing in the box is now in millimeter. You can change to inch by select the "Misc" tab control.

The scan shift and master make shift is for the adjustment for some image board. Leave it blank unless announced on the website for the parameters for certain model of duplicator or by testing your own duplicator.

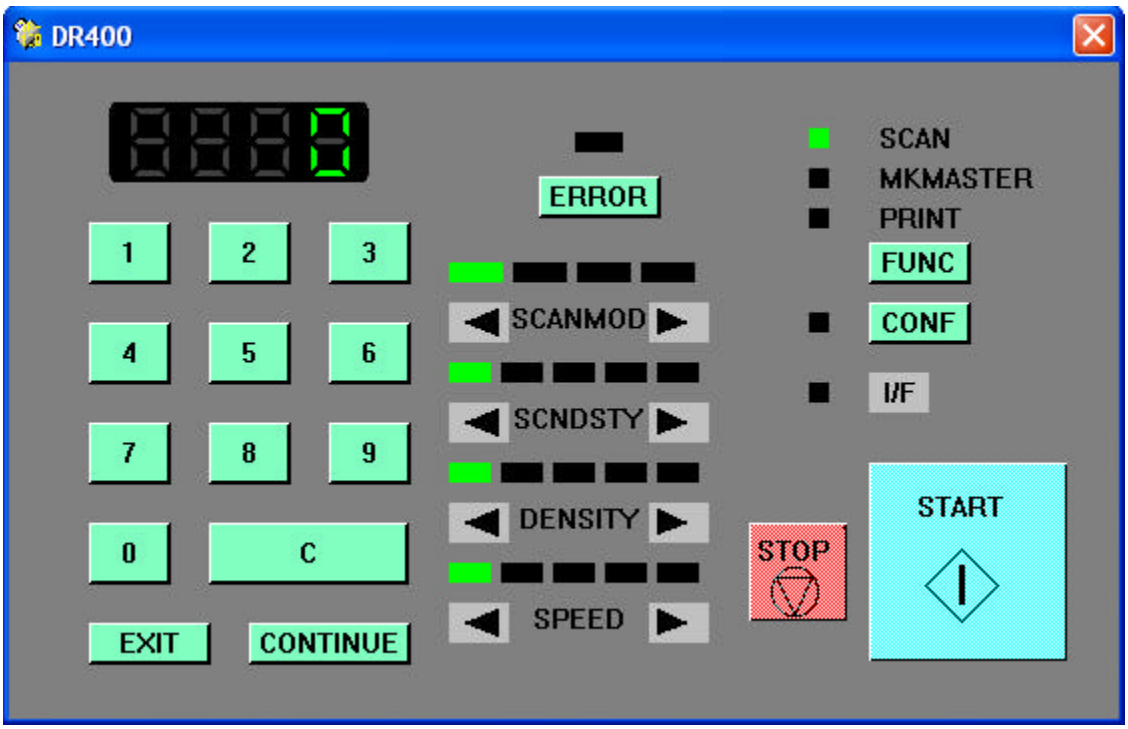
2.1.2 Control your duplicator

Three ways of start the control panel.

1. Select the menu File->Duplicator Operation.
2. Shut cut key F4.
3. When you print from a document to DR400 printer driver and you check the "Automatic Master Make".

See Fig 35.

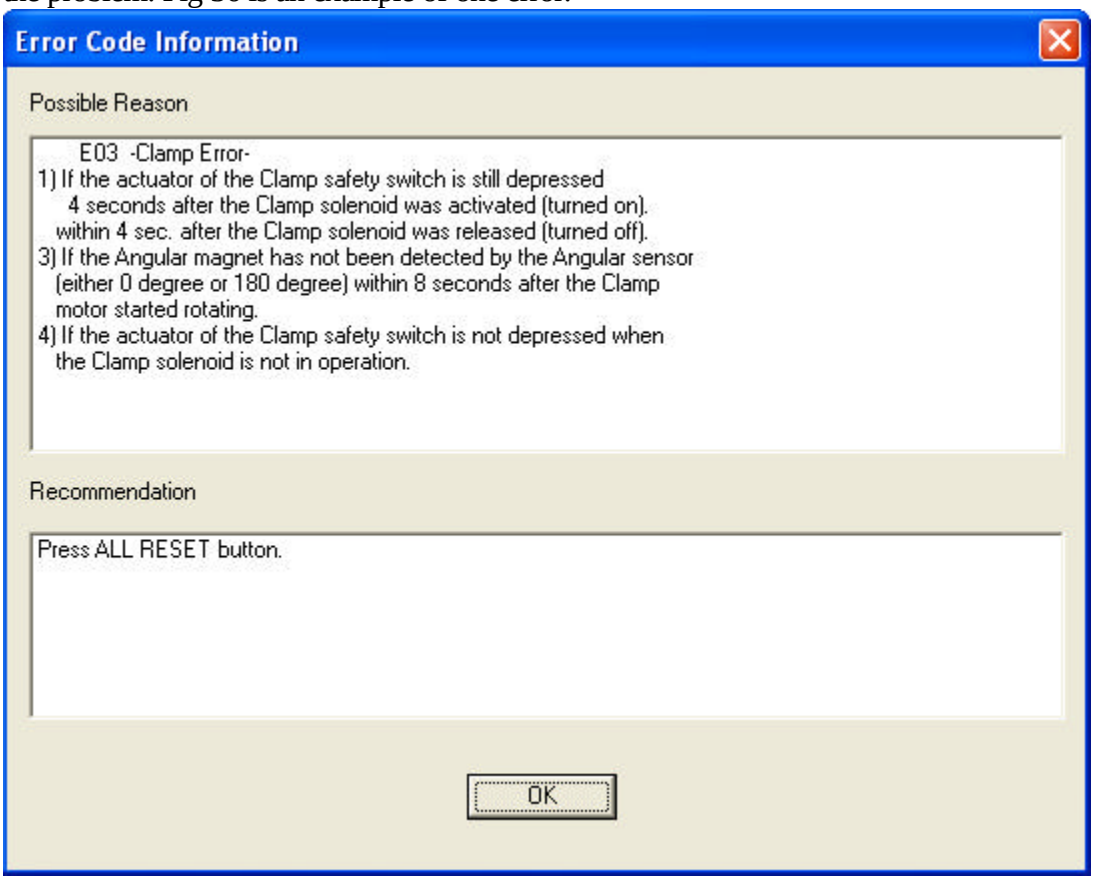
In here you can see the status of the duplicator as well as control the duplicator. On the top left is the actual printer number set on the duplicator.



(Fig 35)

On the right side is the duplicator work mode select and start or stop the operation. It is the same function as on the duplicator.

In the middle part, control the miscellanies features. If certain function can not be controlled and you do not what it be showed, go to Tools->Options and select control parameters.
When error LED is red, something is wrong with the duplicator or communication. If it is the error of the duplicator, the "ERROR" button can give the detail information of the error and proper action in plan text. It is exactly the information from the technical manual so you do not need to read the manual to troubleshooting the problem. Fig 36 is an example of one error.


Error Code Information
Possible Reason
E03 -Clamp Error-
1) If the actuator of the Clamp safety switch is still depressed
4 seconds after the Clamp solenoid was activated (turned on).
within 4 sec. after the Clamp solenoid was released (turned off).
3) If the Angular magnet has not been detected by the Angular sensor
(either 0 degree or 180 degree) within 8 seconds after the Clamp
motor started rotating.
4) If the actuator of the Clamp safety switch is not depressed when
the Clamp solenoid is not in operation.
Recommendation
Press ALL RESET button.
OK

(Fig 36)

2.2 Using DR400

DR400 application is changing. So for detailed information on how to use DR400 application, please use DR400 online help.